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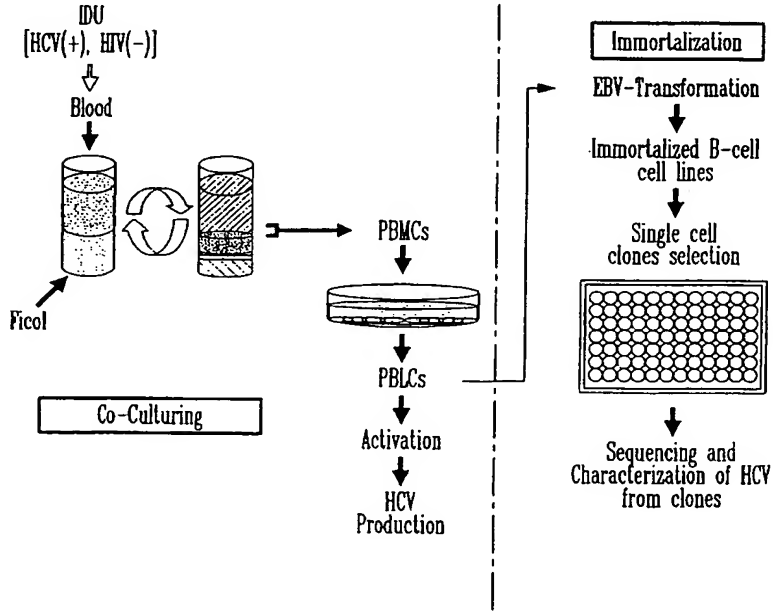
(54) Title: METHOD FOR INDUCING HEPATITIS C VIRUS (HCV) REPLICATION *IN VITRO*, CELLS AND CELL LINES ENABLING ROBUST HCV REPLICATION AND KIT THEREFOR



(57) Abstract: The present invention relates to hepatitis C virus (HCV). More particularly, the invention relates to the development of a tool suitable for the search, discovery and validation of novel HCV antiviral drugs and therapies (e.g. vaccine). The invention further relates to methods for inducing HCV replication *in vitro*,and more particularly to a simple *in vitro* replication assay for HCV. In addition, the invention relates to the use of the methods of the present invention to prognose the resistance/sensitivity of a particular strain of HCV to a chosen anti-HCV agent. In one embodiment, the present invention relates to an adaptation of a therapeutic regimen for a patient infected with HCV which takes into account the resistance/sensitivity phenotype of the HCV strain which infects same. The invention more particularly, relates to a method for generating an established cell line which produces hepatitis C virus (HCV) comprising transforming peripheral blood mononuclear cells (PBMCs) which produce HCV with Epstein Barr virus (EBV). The invention also relates to an EBV established B-cell line capable of replicating complete and infectious HCV. As well, the invention relates to a cell-based *in vitro* replication system for HCV comprising an EBV-transformed B-cell capable of replicating complete and infectious HCV, and a second cell population having HCV tropism and in which robust HCV replication occurs, so that under appropriate culture conditions the second cell population can become infected by the infectious HCV produced by the EBV-transformed B-cell. The present invention also relates to kits for transforming a HCV-producing cell and to kits for diagnosing HCV in a patient.

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